CalPERS

Research Brief

Pension Debate: The Myths and Realities of Defined Benefit and Defined Contribution Plans

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Defined Benefit and Defined Contribution Plans are Different

A **defined benefit (DB)** retirement plan is a traditional pension plan, such as a CalPERS plan, in which the retiree receives a retirement benefit that is guaranteed by law. The amount of the retirement benefit is determined by the participant's years of service with an employer, age at retirement, and the highest one-year or three-year compensation while employed.

Retirement benefits are funded from employee and employer contributions, and investment earnings. The employer is responsible for managing a defined benefit plan and for ensuring adequate funding is available for benefits.

A **defined contribution (DC)** retirement plan is similar to a "deferred compensation" retirement savings account such as a 401(k) plan. There is no guaranteed benefit. Retirement benefits are determined by contributions made to an account by the participant and his or her employer, and investment earnings.

The employee is responsible for managing his or her own retirement account. The employee makes decisions about where to invest his or her retirement savings and how much to regularly contribute. The maximum employer contribution amount is usually set by law or the employer.

The CalPERS Defined Benefit Plan is Well Managed

CalPERS has been a great investor for the taxpayers of California. Over the past 20 years ended June 30, 2006, the CalPERS pension fund earned an averaged 10.03 percent rate of return, which includes two extraordinary years of negative returns in 2000 and 2001, the worst "bear" stock market in a generation. CalPERS has produced positive investment returns 18 of the last 20 years, with management costs well below those charged by typical DC plans. In the 2005-06 fiscal year, CalPERS earned a 12.3 percent return on investment, generating about $8 billion more than the pension fund's 7.75 percent assumed rate of return.

Over the past 22 years, the vast majority of CalPERS income came from investment earnings. According to pension consultant Wilshire Associates, CalPERS investments produced $171.9 billion of income from 1982-2004. During the same period, employer and employee contributions totaled $29.7 billion and CalPERS paid out $48.6 billion in retirement benefits.

A study conducted by Cost Effectiveness Measurement Inc. found that CalPERS investment staff produced $14 billion of excess returns during the 10-year period ended December 31, 2004, while using a less risky investment approach than other public pension funds in the United States, Europe, Canada and Asia.

Over the past 10 years, approximately 75 percent of the income used to pay pension benefits came from investment earnings, not employee or employer contributions.

Public employee pension costs have been stable over the past 10 years. According to the U.S. Census Bureau, from 1995 through 1997, state and local government contributions to pension plans were about 3.0 percent of total state and local government spending annually. By 2002, this had fallen to 1.9 percent due to investment gains earned during the late 1990s. After 2002, following the unprecedented three-year stock market downturn, government contributions increased and reached 2.2 percent in 2004, still below the 3.0 percent paid in the mid-1990s.[1]

For the 2006-07 fiscal year, the State of California will pay $2.67 billion to CalPERS for employee retirement costs, equal to 2.05 percent of the state's total $131.4 billion budget.

Average CalPERS Pension Benefit is Modest

About 25,000 CalPERS members retire each year. The average CalPERS member receives a monthly benefit allowance of $1,695 after retiring at age 59 with 19.7 years of service (service retirement). The average California Highway Patrol employee receives a monthly allowance of $3,794 after retiring at age 55 with 27.9 years of service.

Approximately 41 percent of CalPERS retirees receive less than $10,000 per year in benefits. About 81 percent of retirees receive less than $30,000 per year, with 93 percent of CalPERS retirees receiving $50,000 or less per year.

The vast majority of recent State retirement cost increases are due to market downturn, not to increased benefits. Nearly 80 percent of the increase in employer rates from 2002-04 was due to the two-year downturn in the economy that produced negative investment returns. As a percent of payroll, the State pays less per employee than it did 25 years ago for school employees, state miscellaneous employees, state industrial workers, state safety workers and state peace officer and firefighters.[2]

Many Retirees at Risk of Insecure Retirement

Experts estimate most people need 65 percent to 85 percent of their pre-retirement income to be financially secure in retirement. A study conducted by the Boston College Center for Retirement Research found that 43 percent of working-age households are "at risk" of being unable to maintain their pre-retirement standard of living in retirement. According to the study, the reason for this gloomy picture is the changing retirement landscape defined by rising Social Security retirement age, a sharp decline in traditional pensions coupled with modest 401(k) retirement savings, low savings rates, and longer life spans.[3]

A recent Congressional Research Service study found that only half of older workers in 401(k) plans had saved enough to provide an annual benefit of at least $5,000 from their account.[4] By comparison, CalPERS retirees received an average annual pension benefit of $20,340 in 2005.

Defined Contribution Plans Cost More to Manage

Dollar for dollar, DC plans cost more. Administrative costs of DC plans are higher – often much higher – than DB plans.[5] The average annual cost of managing the CalPERS defined benefit plan from 1997 to 2004 was 0.25 percent of assets. The annual management cost of a DC plan can be as high as 2 percent of assets. The expense ratio for the average stock mutual fund is 1.1 percent of assets. Clearly, the cost of managing a DB plan is much lower than the cost of managing a DC plan.

CalPERS management of investments is very cost effective when compared with other public pension funds. A study by Cost Effectiveness Measurement Inc., found that CalPERS saved $134 million compared to its peers, paying less for consulting, custodial and active management services. The cost of managing the pension fund's investment portfolio was $424 million in 2004 compared to a peer benchmark of $558 million.

In a typical DB plan, 80 cents of each dollar is spent on members who retire; in a DC plan 50 cents of each $1 is spent on benefits with the other

50 cents spent prior to retirement. For retiring members to receive the same amount of benefits, contributions to the fund would need to increase substantially.[6]

Under a defined contribution plan, there is no guarantee that tax dollars put into an employee's account will be used for retirement. Research indicates that most employees who leave one job for another job cash out their DC or 401(k)-type accounts – including the monies contributed by the employer for the purpose of retirement -- rather than roll them over to the next employer's retirement plan.[7] If DC proceeds fall short of basic retirement income needed, the State will end up paying more in public assistance when employees are old, ill and infirm.

Typical management fees for defined contribution plans are much higher than fees for defined benefit pension plans. On average, mutual funds charge $1.35 for "load" and/or administrative expenses for every $100 invested. For each of the last 6 years, CalPERS spent less than two tenths of one percent of the fund's value – 18 cents on every $100 invested.[8]

There would be significant startup costs for a new DC plan, which means additional retirement costs to the State. The State's contributions to the CalPERS plan do not require direct payment of administrative costs to run the system. If the State were to set up a DC plan, it would have to pay for start-up costs. The DC plan does not cover costs of disability retirements and death benefits, which are embedded in the cost of the DB plan. The State would also have the added expense of starting to pay 6.7 percent of payroll for police, firefighters, and others in safety classes who do not get Social Security under the existing DB plan.

Under a traditional defined benefit plan, the vast majority of income used for retirement benefits comes from investment earnings, not taxpayers. A DC plan does not give the State the ability to use investment returns to pay for a portion of pension costs. For example, investment returns and employee contributions generated enough income in the mid-1990s that the State did not pay **any** retirement costs (employer contributions) during a four-year period -- Fiscal year 1998-99 through Fiscal Year 2001-02 -- for 350,000 classified school workers. That represented a savings of over $4 billion in those years alone.

Over the past 10 years, more than 75 percent of the income to CalPERS has come from investment earnings, not employer or employee contributions. Over the past decade, members' contributions have actually exceeded employer contributions by $1.1 million.

A Defined Benefit Plan Helps the California Economy

Under the existing CalPERS defined benefit plan, more than $20.6 billion of pension dollars, 10.9 percent of the portfolio, is set aside for California investments. Replacing CalPERS with a DC plan would reduce the amount of money available for future investment in California businesses. Employees participating in a DC plan choose where to invest their retirement money. Therefore, the State loses the opportunity to redeploy capital to strengthen California businesses, promote job growth, and build communities and infrastructure. These investments – a part of CalPERS' diversified portfolio of investments – help strengthen the State's economy and tax base.

Currently, CalPERS invests more than $11.6 billion in companies based in California – from blue chip corporations on the New York Stock Exchange to start-up firms in south central Los Angeles and the Silicon Valley.

CalPERS holds $2.9 billion in fixed income assets, including corporate bonds in California that enable corporate expansion. CalPERS also invests $6.1 billion in California real estate. These include investments in industrial office properties, office buildings, senior housing, and retail establishments.

CalPERS is one of the largest real estate developers in the state, financing the construction of more than $2 billion in single-family homes. CalPERS has also invested $2 billion into the development and redevelopment of California's urban areas.

CalPERS pension dollars have financed the building of more than 43,000 homes and developed 33,000 lots for single-family homes in 200 California communities. CalPERS pension capital has provided $13.8 billion in mortgages for nearly 100,000 California families.

The private equity portion of the CalPERS portfolio has invested in many start-up companies, including biotechnology that capitalizes on the advent and convergence of new technologies including genomes, bioinformatics and therapeutic agents.

During the recession of the late 1980s, CalPERS was among the only sources of construction capital in the State. After the terrorist attacks on September 11, 2001, CalPERS helped stabilize the New York Stock Exchange by continuing to invest into the stock market in spite of market uncertainty.

Defined Contribution Plans Reduce Retirement Security

Retirement futures are less certain with defined contribution plans. Tax dollars set aside for employees to finance their retirement under a DC plan may never be used as intended. That is because under a DC plan, participants will face risky challenges investing on their own. Some may not be able to resist cashing out retirement assets prematurely. These are uncertain factors on which to base a worker's retirement income security. In addition, research suggests that DC plan participants generally earn rates of return on investment far below what DB plan funds typically earn.[9]

All things being equal, a defined benefit plan produces superior retirement benefits compared to a defined contribution plan. For example, an employee in a DB plan (with a benefit formula of 2% at age 60 and employer and employee contributions of 10% of pay) hired at age 30 with a starting salary of $25,000 and 5% pay increases each year will have a retirement benefit with a present value of $732,100 upon retirement at age 60.

In contrast, the retirement benefit for an employee in a DC plan hired at the same age with the same salary (assuming that the DB plan and DC plan both earn a rate of return of 8%) will have a present value of $497,529 upon retirement at age 60.[10]

Retirees risk outliving their retirement assets in a DC plan. DC plans do not take into account the very real possibility and risk that the retiree will outlive their retirement assets. If public servants do not save enough through their DC retirement plan, who will take care of them when their retirement savings run out? Will the State's social safety net – currently stretched to the limits – be responsible?

Defined contribution plans do not include inflation protection, disability benefits, or death benefits. For retirees in a DC plan, an annual inflation rate of 2.5 percent from age 65 to 93 would cut purchasing power in half. Employees in DC plans would not be entitled to either disability or death benefits. This would create an inequitable work environment and potential morale problems when workers with DB plans work along side of workers with DC plans. (Disability & death benefits are already factored into a DB plan.)

When offered a DC plan, some employees do not contribute and most contribute less than the maximum amount allowed. 26 percent of employees who are eligible for 401(k) plans do not participate. Non participation is concentrated in lower-income employees. Among all employees, less than 10 percent contribute the maximum allowable amount, which further reduces their ability to match DB retirement benefit amounts.[11]

Experience indicates defined contribution plans often provide inadequate retirement benefits. Research suggests most employees typically do not make good investment decisions that ensure adequate retirement savings in their later retirement years. An annual study conducted by Dalbar, a Boston fund consulting firm, found that the average stock fund investor had a 5 percent annual gain from 1984 to 2000; compared to a 16 percent annual average gain for the Standard & Poors (S&P) 500 stock index for that period.[12] Over the last 10 years ending June 30, 2004, CalPERS investment returns averaged 9.7 percent.

A John Hancock Financial Services Retirement Survey of defined contribution participants published in May 2002 showed that "many have a cockeyed view of how investments work across the board. " John Hancock researchers found that most defined contribution participants will fall well shy of the estimated 75 percent of pre-retirement income needed to maintain the same lifestyle in retirement.[13]

Researchers also found half of DC plan investors do not diversify and almost none rebalance portfolios periodically, resulting in retirement portfolios that may be either too conservative or too risky to provide adequate retirement savings.[14]

Defined benefit pension plans outperform 401(k) plans in a down market. According to a 2004 analysis by Watson Wyatt Worldwide, defined benefit plan returns tend to do better than those of 401(k) plans during bad market years that follow periods of hot stock market returns. Watson Wyatt Worldwide analyzed 2000 and 2001 Form 5500 data for companies that sponsor both defined benefit and defined contribution plans.

Previous studies by Watson Wyatt showed that from 1995 to 1998, defined benefit plan returns beat those of 401(k) plans. Once the market turned sharply downward in March 2000, defined benefit plan returns began to dominate again, with Watson Wyatt researchers theorizing that better downside protection came from the higher portfolio diversification of the professionally managed defined benefit plans.[15]

Defined Benefit Plans Better for Recruitment and Retention of High Quality, Competent Public Work Force

A traditional defined benefit retirement plan helps the State and other government employers recruit for highly qualified workers. Government competes with private sector employers for highly qualified employees. The State has and will continue to have challenges recruiting scientists, researchers, technology workers, nurses, doctors, accountants and other specialized workers. (This occurred when the State had mandatory tier 2 programs in the early 1990s.) Human resource specialists say it is retirement benefits not the pay that attract people to work for the State. State workers pay has not kept pace with the private sector in recent years – most State employees went without annual pay raises for many of the last 13 years.[16]

A 2005 study by CPS Human Resource Services concluded that government employers throughout California will face a shortage of good supervisors and managers in the coming years as large numbers of baby boomers retire and the demand for government services go up.[17]

DB plans promote longevity and loyalty, producing a good return on investment in training specialized workers such as firefighters and safety personnel. DB plans encourage employees to stay in the system to increase retirement benefits by building up service credit. In contrast, under a DC plan, employee turnover will likely be higher, causing the State and local governments to waste taxpayer dollars training a revolving door of workers.

DC plans would encourage more workers with more seniority and higher pay to continue working longer rather than retire early. The performance of investment markets would have a significant influence on when people retire. When the economy is doing poorly and the value of DC accounts go down, workers may decide to continue working beyond a desired early retirement date, creating less opportunity to hire less expensive workers.[18]

People who retire with a defined contribution plan end up retiring later rather than earlier. The expected retirement age of a DB plan is 63.9 nationwide; the expected retirement age of a DC plan participant is 65.1 years.[19]

Under a DC plan, market performance would determine when people retire, not age. You would see larger numbers of workers retiring during periods of market growth and fewer workers retiring during down markets.

Most Large Employers Staying with Defined Benefit Plans

The decrease in DB plans has been limited nearly exclusively to small, not large employers. Companies that are discontinuing DB coverage have been small employers, not large employers, and they are doing so because of the expense of complying with complex federal regulations, most of which do not apply to the public sector.[20]

Large employers have generally kept their DB plans rather than convert to DC plans.

- **Most of the decrease in DB plans has occurred among small and medium size employers** (employers with less than 1000 employees).[21]

- **Eighty percent of professional service firms offer DB plans, with the average contribution from companies with over 1,000 employees sitting at $40 million in 2003.[22]**

- **Due to their size, public employers are more comparable to large private-sector employers, most of which offer DB plans.** In 2003, 68 percent of large private-sector employers offered DB plans compared to 45 percent of all private sector employers.[23]

- **Although DB plans are more prevalent in the public sector, it is likely that more private sector employers would adopt or continue DB**

plans were it not for the cost and administrative burden imposed by federal ERISA laws and regulations. Because public pension plans are exempt from most of ERISA, DB plans are even more advantageous for public employers than for private employers.[24]

- Large and medium private companies value DB plans as primary recruitment and retention tool (American Benefits Council).

- Examples of large companies with DB plans:

  - Chevron
  - Unocal
  - Lockheed Martin
  - Boeing
  - Albertson's
  - Boise Cascade
  - Louisiana Pacific
  - Safeco
  - Weyerhaeuser

Only 17 percent of Fortune 100 companies have a DC plan as their primary benefit, according to Watson Wyatt. Most large employers continue to offer defined benefit plans as their primary retirement program and its use among large employers with 10,000 or more employees is **increasing**. The highly regarded Employee Benefits Research Institute (EBRI) found that since 1985, there was an actual increase in the number of large employers that offered a defined benefit plan as their primary retirement plan. This occurred during a period of many corporate mergers of large firms, who had a unique opportunity to select one or the other.[25]

The majority of U.S. companies with 1,000 or more employees that offer a traditional pension plan believe their DB plan improves employee retention, according to a September 2004 study by Diversified Investment Advisors.[26]

Public Sector Defined Contribution Plans Have Not Been Very Successful

Since 1997, several states have experimented with defined contribution plans, giving their employees the opportunity to change from defined benefit plans as their primary retirement plan. In Florida and Michigan, an overwhelming majority – more than 90 percent of those eligible to switch to a DC plan – elected to stay with the DB plan.[27]

The state of Nebraska recently converted back to a DB plan from a DC plan. A study showed that over 20 years, the typical worker posted an average annual return of 6 to 7 percent. (Money managers running the state's traditional defined benefit pension plan produced 11 percent average annual returns.) Even though the state made much effort to help individuals invest wisely, half of all employees stayed in the default fund, even though they had 11 choices. Nebraska retirement system officials were concerned that the state was wasting taxpayer money via matching contributions to workers accounts.[28]

When the Illinois Municipal Retirement Fund looked into switching from a DB to DC plan, it found that its total cost – administrative and investment expenses – could rise from 0.44 percent of assets to as much as 2.25 percent of assets, a difference that approached $315 million a year.[29]

The Value of Defined Contribution "Portability" is Overstated

The notion that workers today are more mobile and want more portability of their retirement benefits is incorrect.

- **Workers are not necessarily more mobile**. From 1983 to 2000, median job tenure increased or stayed the same for all workers in the U.S. with the exception of workers in two sectors (manufacturing and transportation/public utilities).[30]
- **Public-sector workers are even less mobile**. From 1983 to 2000, the median tenure for government workers in the U.S. increased from 5.8 years to 7.2 years. In 2000, the median years of tenure for government workers (7.2 years) was more than twice that for workers in the private sector (3.2 years).[31]
- **DC plans are not necessarily the solution to retirement savings portability**. A significant proportion of workers with DC plans "cash out" their accounts when they change employers rather than leave their contributions in the account or roll the account over to their new employer's plan. For example, a study conducted by the human resources consulting firm Hewitt Associates found that 57 percent of employees who leave their companies choose cash payments from their retirement savings plans instead of rolling over the balances to their new employers' plans or into individual accounts.[32]
- **DB plans have been adopting changes to make benefits more portable**, including shorter vesting periods and expanded reciprocity between the pension plans of different public employers.
- **Public employees prefer defined benefit plans.** When public employees have the option of participating in an alternative DC retirement plan, most choose to continue in a traditional DB pension plan. During the first two years of Florida's optional retirement program, only 3.4 percent of eligible employees opted for the DC alternative (8 percent of new hires).[33] In Michigan, state employees hired prior to March 31, 1997, had the option

to remain in a DB plan or switch to a DC plan that was mandatory for all new employees. Only 6 percent of eligible employees switched to the DC plan.[34]

A defined contribution plan would hurt "portability" relative to reciprocity with public agencies within CalPERS. One of the recruitment features of the CalPERS DB plan is that there is reciprocity with other public agencies in the State. Employees covered by a DC plan would not have the same reciprocity benefit as others who work for the State.

Employees taking money out of CalPERS when they leave State service will increase costs for taxpayers. The Sacramento Bee in a 1996 editorial pointed out that, "Every worker intending to leave public service short of vesting for a pension – political appointees, highly paid managers, and professionals who have private sector skills – would likely choose the new option, draining funds from the system. That would leave taxpayers with the same pension obligations but less money to fulfill them."

CalPERS Taking Steps to Reduce Employer Costs

CalPERS took action in 2005 to address the issue of employer retirement costs. The CalPERS Board adopted an employer **rate "smoothing" policy** to reduce the volatility of employer contribution rates that sometimes caused budgeting challenges. The new policy has already resulted in lower rates for most employers. Elements of the policy include:

- Spreading pension fund market value asset gains and losses over 15 years rather than 3 years
- Changing the "corridor" limits for actuarial value of assets from 90% to 110% of market value to 80% to 120%
- Requiring employers to pay for 6% (i.e., 30-year amortization) of recognized asset gains and losses each year instead of 10%

CalPERS is also **attacking the cost of pension fraud and abuse**. In the 2005 legislative session, CalPERS sponsored a package of three bills to:

- More clearly define pension fraud and establish criminal penalties and restitution for those found guilty of such illegal activity;
- Expand the authority of CalPERS to require medical re-evaluations for those on disability retirement who have reached the minimum age of voluntary retirement to verify continuing eligibility for disability retirement; and
- Give CalPERS fraud investigators greater access to information maintained by the Employment Development Department and workers' compensation insurance carriers in order to better investigate cases of disability fraud.

The effort to enact the bills into law continues in the 2006 legislative session.

Higher DC Plan Management Fees Reduce Benefits for Participants

Higher management fees are charged for 401(k)-style DC plans than traditional DB pension plans. Wall Street money managers make money on DC assets even if investors lose money on their investments. Public employees are better off with public sector investment managers managing their retirement assets rather than mutual fund managers whose goal is making money from management fees. In addition, DC plans are less diversified because individual funds do not invest in the full range of asset classes such as real estate and private equity investments.

No Immediate Taxpayer Savings from Defined Contribution Plan

Changing to a defined contribution (DC) plan would not save the State and local government money for at least 10 years because it will add a second retirement plan that will mean additional administrative and startup costs to government budgets. In addition, the State would have to pay more money to cover disability and death benefits for employees covered under any new defined contribution plan, as well as Social Security, which State safety personnel and others do not currently receive.

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